



**CERAMIC ABSTRACTS**  
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# CERAMIC ABSTRACTS

November–December, 1985

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Analyst (London)  
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Chemical Engineering (New York)  
Chemical & Engineering News  
Chemical Week  
Chemicke Zvesti  
Chemtech  
Ciments, Betons, Plaques, Chaux  
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Cuadernos I.A.D.I.C. [Instituto Argentino de Investigaciones Ceramicas]

Denshi Tsushin Gakkai Ronbunshi, [Series] E  
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Earth and Mineral Sciences  
Electric Technology USSR (Engl. Transl.)  
Electronic Packaging and Production  
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Epitoanyag  
EuroClay

F C [Fine Ceramics] Report [Japan]  
Faenza  
Fizika Tverdogo Tela (Leningrad)  
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Glass Industry  
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**South African Ceramic Society Symposium Proceedings**  
**Soviet Powder Metallurgy and Metal Ceramics (Engl. Transl.)**  
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1985

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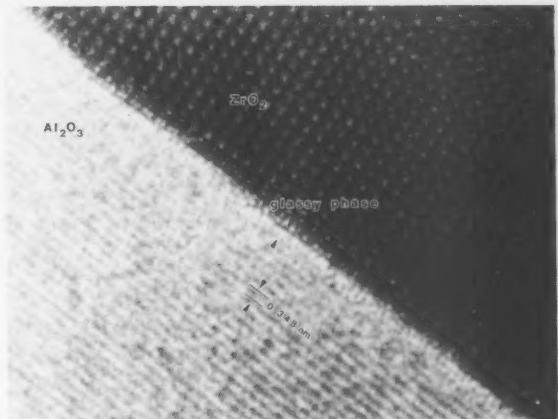
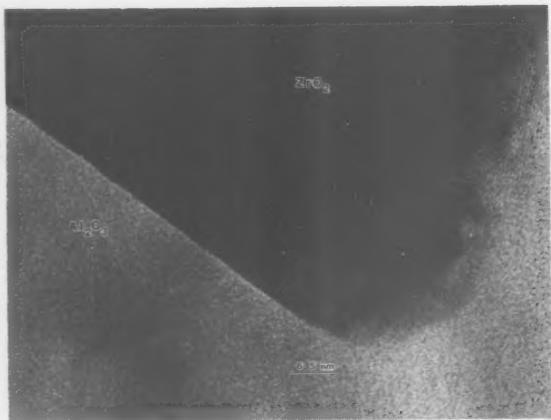
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## HREM OF ZIRCONIA-TOUGHENED ALUMINA: I INTERGRANULAR ZIRCONIA



High-resolution imaging is used to examine the interface structure in  $\text{ZrO}_2$ -toughened  $\text{Al}_2\text{O}_3$ .  $\text{ZrO}_2$  twins during the martensitic tetragonal to monoclinic phase transformation to minimize the shape change. The twin boundaries are coherent, while the  $\text{ZrO}_2/\text{Al}_2\text{O}_3$  interface involves an amorphous wetting phase,  $\sim 10 \text{ \AA}$  thick.

Sabine Kraus  
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TEM

From the 87th Annual Meeting Ceramographic Exhibit

